



Milesight UG56 LoRaWAN Gateway User Manual

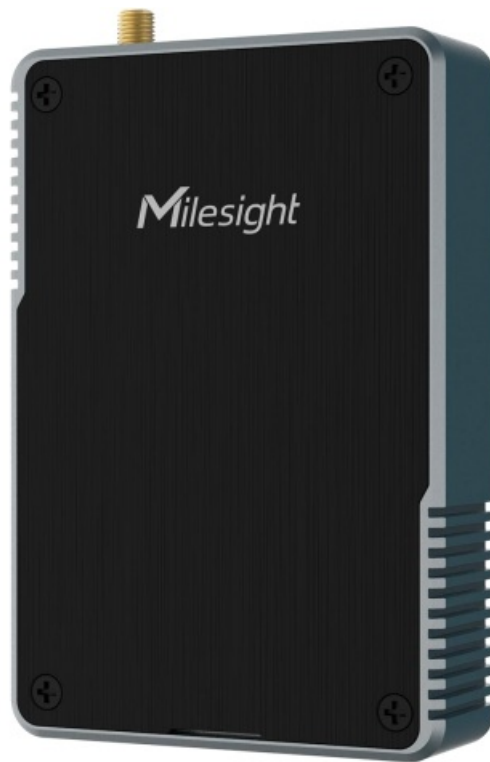
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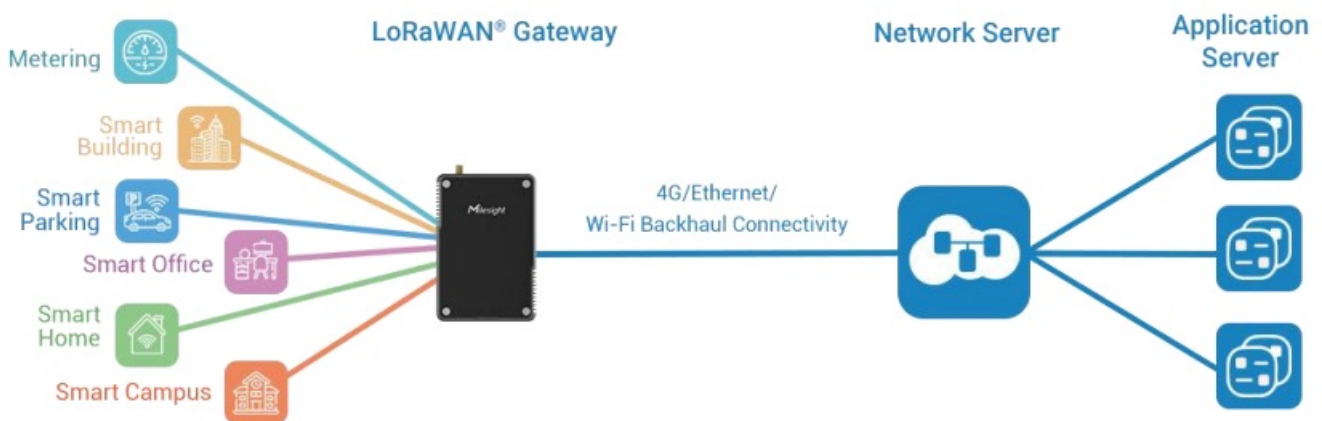
Milesight UG56 LoRaWAN Gateway



INTRODUCTION

UG56 is a robust 8-channel indoor LoRaWAN® gateway. Adopting SX1302 chip and high-performance quad-core CPU, UG56 supports connection with more than 2000 nodes. UG56 has a line of sight up to 15 km and can cover about 2 km in an urbanized environment, which is ideally suited to smart buildings, smart industries and many other indoor applications. UG56 supports not only multiple back-haul backups with ethernet, Wi-Fi and cellular, but also has integrated main stream network servers (such as TTl, ChirpStack, etc.), and built-in network server and Milesight IoT Cloud

Application Example



Features

- Quad-core industrial processor with big memory
- Equip with SX1302 chip, handling a higher amount of traffic with lower consumption
- 8 half-duplex channels
- Rugged metal enclosure for industrial applications

- Desktop or wall mounting
- Multi-backhaul connectivity backups with Ethernet, cellular (4G/3G) and Wi-Fi
- DeviceHub and Milesight IoT Cloud provide easy and centralized management of remote devices
- Enable security communication with multiple VPNs like IPsec/OpenVPN/L2TP/PPTP/DMVPN
- Compatible with mainstream network servers like The Things Industries, ChirpStack, etc.
- Detect and analyze the noise level and provide intuitive diagram for deployment
- Built-in network server and MQTT/HTTP/HTTPS API for easy integration
- Embedded Python SDK for userssecondarydevelopment
- Fast and user-friendly programming node-RED development tool

Specifications

Hardware System

- CPU Quad-core 1.3 GHz, 64-bit ARM Cortex-A35
- Memory 512 MB DDR3 RAM
- Flash 8 GB eMMC
- Extendable Storage 1 × Micro SD Slot (Internal)

LoRaWAN

- Antenna Connector 1 × 50 Ω SMA Connector (Center PIN: SMA Female)
- Channel 8 (Half-duplex)
- Frequency Band CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4Sensitivity -140 dBm
Sensitivity @292bps
- Output Power 27 dBm Max
- Protocol V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class CLBT Support

Ethernet Interface

- Port 1 × RJ45 (PoE PD supported)
- Physical Layer 10/100 Base-T (IEEE 802.3)
- Data Rate 10/100 Mbps (Auto-Sensing)
- Interface Auto MDI/MDIX
- Mode Full or Half Duplex (Auto-Sensing)
- Wi-Fi Interface
- Antenna Internal Antenna
- Standards IEEE 802.11b/g/n, 2.4 GHz
- Mode AP or Client mode
- Security WPA/WPA2 authentication, WEP/TKIP/AES encryption
- Tx Power
 - 802.11b: 18 dBm +/-2.0 dBm (11 Mbps)
 - 802.11g: 15 dBm +/-2.0 dBm (6 Mbps)
 - 802.11g: 15 dBm +/-2.0 dBm (54 Mbps)

- 802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS0_HT20)
- 802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS7_HT20)
- 802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS0_HT40)
- 802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS7_HT40)

Cellular Interface (Optional)

- Antenna Internal Antenna
- SIM Slot 1 (Mini SIM-2FF)

Others

- Reset Button 1 × RST (Internal)
- Console Port 1 × Type-C
- LED Indicators 1 × SYSTEM, 1 × LoRa
- Built-in Watchdog, Timer

Software

- Network Protocols PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, ARP, SNTP, Telnet, SSH, MQTT, etc. VPN Tunnel
- OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN
- Firewall ACL/DMZ/Port Mapping/MAC Binding/URL Filter
- Management Web, CLI, SMS, On-demand dial up, DeviceHub, Milesight IoT Cloud
- Reliability WAN Failover
- App Python SDK, Node-RED

Power Supply and Consumption

- Power Input 1. 1 × 802.3 af PoE Input 2. 5V, 2A by Type-C Port
- Power Consumption Typical 1.8 W, Max 6.9 W

Physical Characteristics

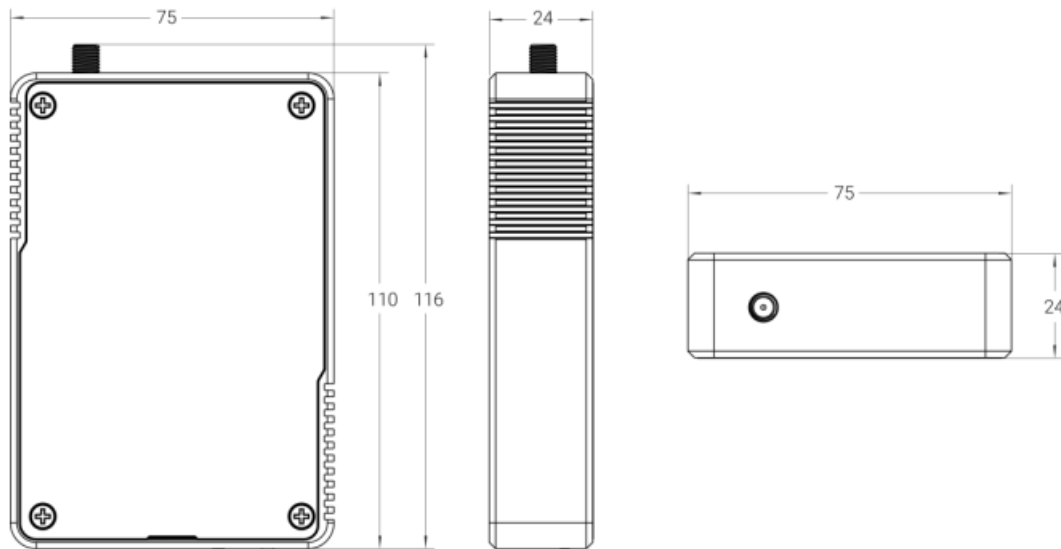
- Ingress Protection IP30
- Housing & Color Metal, Black (Non-cellular Version) or Blue (Cellular Version)
- Dimensions 110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in)
- Installation Desktop, Wall Mounting

Environmental

- Operating Temperature -20°C to +60°C (-4°F to +140°F)
- Storage Temperature -40°C to +85°C (-40°F to +185°F)
- Ethernet Isolation 1.5 kV RMS

- Relative Humidity 0% to 95% (non-condensing) at 25°C/77°F

Dimensions(mm)



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Documents / Resources

	<p>Milesight UG56 LoRaWAN Gateway [pdf] User Manual UG56 LoRaWAN Gateway, UG56, UG56 Gateway, LoRaWAN Gateway, Gateway</p>
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